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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/408,808	09/29/1999	DAVID A. WRIGHT	22-0074	4482

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EXAMINER

CONTEE, JOY KIMBERLY

ART UNIT	PAPER NUMBER
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2686

10

DATE MAILED: 06/21/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/408,808

Applicant(s)

WRIGHT ET AL.

Examiner

Joy K Contee

Art Unit

2686

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 08 July 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-32 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 12-32 is/are allowed.
- 6) ☒ Claim(s) 1-8 is/are rejected.
- 7) ☒ Claim(s) 9-11 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
- ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____.
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: _____.

Art Unit: 2686

0DETAILED ACTION

Response to Arguments

1. Applicant's arguments with respect to claims 1 and 23 have been considered but are moot in view of the new ground(s) of rejection.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless -

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 1-6 and 23-27 are rejected under 35 U.S.C. 102(b) as being anticipated by Van Dervort, U.S. Patent No. 5,812,528.

Regarding claim 1, Van Dervort discloses in a processing satellite communications system including at least one processing satellite having a receiver and a transmitter for respectively receiving and transmitting a data cell, a method for virtual path switching of said data cell, the method comprising:

Art Unit: 2686

receiving a data cell (e.g., ATM cell) at one of a plurality of input ports (i.e., reads on port, RX1 and RX2 of test instrument 54, see Figs. 3a-3c) of said processing satellite, said data cell including an assigned virtual path identifier (VPI) associated with a destination output port (i.e., reads on intermediate or next destination node) (col. 3, lines 12-15 and col. 9, lines 41-48 and lines 56-61 and col. 11, lines 14-18 and col. 13, lines 1-9);

examining said assigned VPI in said data cell to determine said destination output port associated with said assigned VPI (col. 3, lines 52-59); and

transferring (i.e., reads on switching) said data cell to said destination output port associated with said assigned VPI (col. 3, lines 50-52).

Regarding claim 2, VanDervort discloses the method for virtual path switching of claim 1 comprising associating said destination output port with a crosslink to another processing satellite (e.g., satellite 10) (col. 3, lines 50-67 to col. 4, lines 1-21).

Regarding claim 3, VanDervort discloses the method for virtual path switching of claim 1 further comprising: establishing a set of VPIs wherein each VPI is uniquely associated with a single output port on said processing satellite (col. 3, lines 50-56); establishing a set of virtual channel identifiers (VCIs) (col. 3, lines 27-31); assigning said assigned VPI from said set of VPIs and a VCI from said set of VCIs to said data cell (col. 3, lines 32-59); and transmitting said data cell to said processing satellite (i.e., satellite is inherently since links connecting nodes may include satellite transmission links) (col. 7, lines 33-39).

Art Unit: 2686

Regarding claim 4, VanDervort discloses the method for virtual path switching of claim 1 further comprising: establishing at least one control subfield indicating a distinct treatment for data cells (col. 11, lines 20-30); establishing at least one routing subfield corresponding to one of said output ports (col. 9, lines 63-67); and dividing said assigned VPI into a control subfield and a routing subfield (col. 11, lines 30-42).

Regarding claim 5, VanDervort discloses the method for virtual path switching of claim 4 wherein said examining step comprises examining said routing subfield to determine said destination output port (col. 10, lines 1-13).

Regarding claim 6, VanDervort discloses the method for virtual path switching of claim 5, wherein examining said control subfield comprises determining a level of error control for said data cell (i.e., reads on Header Error Control) data used to reconstruct the header) (col. 11, lines 59-62).

Regarding claim 23, VanDervort discloses an apparatus for path switching a data cell to a satellite output port for transmission in a downlink, the apparatus comprising: an input module comprising a plurality of input ports (reads on node); an output module comprising a plurality of output ports (i.e., reads on "next" node); and circuitry responsive to address bits in a data cell and to an assignment of said address bits to said output ports, for coupling said data cell to at least one of said output ports (col. 3, lines 49-59).

Art Unit: 2686

Regarding claim 24, VanDervort discloses the apparatus for path switching of claim 23 wherein said data cell is an ATM cell (col. 3, lines 1-31).

Regarding claim 25, VanDervort discloses the apparatus for path switching of claim 23 further comprising an examining circuit for examining a virtual path identifier (VPI) in said data cell (col. 3, lines 52-59).

Regarding claim 26, VanDervort discloses the apparatus for path switching of claim 23 wherein said address bits include at least a portion of a virtual path identifier (VPI) (col. 3, lines 9, lines 56-67).

Regarding claim 27, VanDervort discloses the apparatus for path switching of claim 26 wherein said address bits further include at least a portion of a virtual channel identifier (VCI) (col. 9, lines 56-67).

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 7-8 are rejected under 35 U.S.C. 103(a) as being unpatentable over VanDervort, in view of Takahashi et al. (Takahashi), U.S. Patent No. 6,240,075, previously used.

Art Unit: 2686

Regarding claim 7, VanDervort discloses the method for virtual path switching of claim 5, but fails to disclose comprising examining said control subfield to determine a level of output queuing priority for said data cell.

In a similar field of endeavor, Takahashi discloses examining said control subfield to determine a level of output queuing priority for said data cell (col. 4, lines 34-55).

At the time of the invention it would have been obvious to one of ordinary skill in the art to modify VanDervort to include a queuing priority for the purpose of maximizing arbitration.

Regarding claim 8, VanDervort discloses the method for virtual path switching of claim 1, but fails to disclose providing at least one multicast module on said processing satellite wherein said multicast module is associated with one multicast output port; and providing at least one multicast routing table having memory locations storing addressing information.

In a similar field of endeavor, Takahashi discloses providing at least one multicast module on said processing satellite wherein said multicast module is associated with one multicast output port; and providing at least one multicast routing table having memory locations storing addressing information (col. 3, lines 59-67 to col. 4, lines 3).

Regarding claim 9, VanDervort as modified by Takahashi discloses the method for virtual path switching of claim 8 further comprising: establishing a set of VPIs wherein each VPI is uniquely associated with a single output port on said processing satellite, and wherein at least

Art Unit: 2686

one of said VPIs is a multicast VPI uniquely associated with said multicast output port; and establishing a set of VCIs (col. 3, lines 49-59).

Regarding claim 10, VanDervort as modified by Takahashi discloses the method for virtual path switching of claim 9 further comprising inherently assigning said multicast VPI to said data cell, and assigning a VCI from said set of VCIs to said data cell (col. 9, lines 41-48).

Regarding claim 11, VanDervort as modified by Takahashi discloses the method for virtual path switching of claim 10 wherein said transferring step comprises transferring said data cell to said multicast output port uniquely associated with said assigned multicast VPI (see Takahashi, col. 2, lines 39-47 and col. 9, lines 47-65).

At the time of the invention it would have been obvious to one of ordinary skill in the art to modify VanDervort to include a multicast VPI for the purpose of advising the ATC cell of multicast processing.

Allowable Subject Matter

6. Claims 12-22 are allowed.
7. Claims 9-11 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Art Unit: 2686

8. The following is a statement of reasons for the indication of allowable subject matter: prior art fails to disclose the method for virtual path switching as stated in the limitations of at least the independent claims 12,17,19,21 and 28 and that which is stated in the dependent claims 9-11.

Conclusion

10. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Peyrovian et al., U.S. Patent No. 6,707,800 discloses an ATM network with central call processor.

Freeburg et al., U.S. Patent No. 6,128,287, discloses a method of combining cell streams in a radio communications system.

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Joy K.Contee whose telephone number is (703) 308-0149, M-F, 5:30 a.m. to 2:00 p.m. If attempts to reach the Examiner are unsuccessful, her supervisor, Marsha Banks-Harold can be reached on (703)305-4379.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is (703)306-0377.

Any response to this action should be mailed to:

Commissioner of Patents and Trademarks

Art Unit: 2686

Washington, D.C. 20231


or faxed to:

(703) 872-9306 (for formal communications intended for entry and for
draft communications, please label "PROPOSED" or "DRAFT")

*Hand-delivered responses should be brought to Crystal Park II, 2121 Crystal
Drive, Arlington. VA., Sixth Floor (Receptionist).*


Joy K. Contee

June 12, 2004


**CHARLES APPIAH
PRIMARY EXAMINER**